

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/799,306	ENGELBART ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ryan A. Jarrett	2125	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview on 4/13/05.
2. ☒ The allowed claim(s) is/are 1-39.
3. ☒ The drawings filed on 12 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>1/20/05</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>4/13/05</u></li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|--|---|

47

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Elizabeth Odell on 4/13/05.

3. The application has been amended as follows:

In claim 37 line 4, "the material" was replaced with --a material--.

In claim 38 line 4, "the material" was replaced with --a material--.

### ***Allowable Subject Matter***

4. Claims 1-39 are allowed.

5. The following is an examiner's statement of reasons for allowance:

In addition to the previous reasons for allowance, the prior art of record (Holmes et al. US 6,799,619) fails to teach or fairly suggest, in a method enabling automated repair of defects in a composite structure formed with a material placement machine that lays composite material in one or more courses and one or more plies to form the

structure, automatically causing the material placement machine to return to and place material sufficient for repairing a defect determined to be unacceptable and repairable by the material placement machine without user intervention, in combination with the remaining features and elements of the claimed invention.

In col. 7 lines 14-19, Holmes et al. discloses, "For example if the controller **20** detects a space between two fiber tapes **2** based on the digital images provided by the camera **9**, the controller **20** issues control signals to the fiber placement head **12** so that the fiber placement head **12** automatically places the two fiber tapes **2** closer to one another." However, in the context of the Holmes et al. disclosure as whole, the two fiber tapes (here in col. 7 lines 14-19) that are automatically placed closer to one another by the fiber placement head cannot be interpreted to mean the two fiber tapes that have already been laid, but rather the two fiber tapes that are currently, or subsequently, laid by the fiber placement head.

For example, in col. 8 lines 37-57, Holmes et al. discloses that if a gap is detected that is less than a defect threshold but greater than a correction threshold, then the controller will alter the head placement device to decrease the space between the two fiber tapes. Thus, the fiber placement machine takes corrective action to avoid a defect even before the defect becomes so severe as to require repair.

Alternatively, if the gap exceeds the defect threshold, then a marking device marks the gap. The mark may be detected by a "machine" that automatically discards or repairs the affected region of the composite structure. However, Holmes et al. does not disclose that the "machine" is the fiber placement machine.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

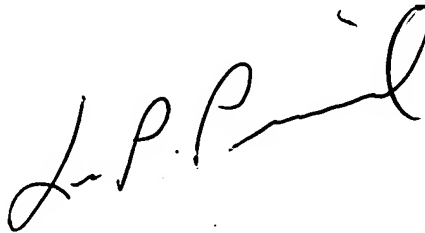
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan A. Jarrett  
Examiner  
Art Unit 2125

4/13/05

A handwritten signature in black ink, appearing to read "L. Picard", with a stylized flourish at the end.

**LEO PICARD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**